



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Tsukasa Ohnishi

Application No.: 10/682,305

Art Unit: 1742

Filed: October 10, 2003

Examiner: Sikyin Ip

For: LEAD-FREE SOLDER

DECLARATION UNDER 37 CFR 1.132

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Shoichi Hirose, declare as follows:

1. I am a Japanese patent attorney representing the assignee of the present application.

2. My mother tongue is Japanese and my career as a patent attorney is over thirty years, particularly in the technical field of material science, e.g., metallurgical arts.

3. I have carefully read the Japanese Published Unexamined Patent

Application 2001-205476 (JP 2001-205746), which I will refer to as Japan '746.

4. The Japanese text describes a brazing alloy which includes Sn, preferably Ag, and a third element which forms an intermetallic compound with Sn. The intermetallic compound has a breakdown temperature which is higher than the melting point of Sn. Many substances can be used as the third element, but preferred elements are one of Au, Cr, Co, Cu, Ni, Pd, Pt, Rh, Se, and Te.

5. Japan '746 only discloses using a single third element, which is to say a single one of Au, Cr, Co, etc. Japan '746 does not disclose using more than one such element in combination.

6. Claim 1 of Japan '746 describes the breakdown temperature of the third element and the particle diameter of the intermetallic compound which the third element forms. Claim 2 of Japan '746 lists some elements which can be used as the third element. Namely, claim 2 states that the brazing alloy as claimed in claim 1 is characterized in that "any one of Au, Cr, Co, Cu, Ni, Pd, Pt, Rh, Se, and Te is used as the element having a higher breakdown temperature than the melting point of Sn".

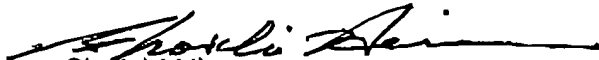
7. In Japanese patent practice, it is well known that "any one of" means only one. In other words, claim 2 of Japan '746 does not allow the presence of two or more of Au, Cr, Co, etc.

8. For this reason, it would be clear to any Japanese patent attorney that Japan '746 only discloses an alloy including a single one of Au, Cr, Co, etc. It does not disclose the idea of an alloy containing two of Au, Cr, Co, and the like.

9. Accordingly, Japan '746 does not disclose an alloy containing both Cu and Co, for example, like the present application does.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,


Shoichi Hirose

Date: Nov. 25, 2000